Claims 1, 3, 4, 14 and 31 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Coe. Applicant respectfully traverses the rejection.

The Examiner states that the claimed first and second semiconductor regions correspond to layers 11 and 12 in Coe. It is clear, however, that the layers 11 and 12 of Coe are alternately arranged in the vertical direction, and are not alternately arranged in a surface portion of the major surface of the semiconductor chip. In order to clarify the disclosed invention, applicants have amended claim 1 to state that the first semiconductor regions and the second semiconductor regions are alternately arranged in a surface portion of the major surface of the semiconductor chip. Coe fails to disclose this feature. Accordingly, the reference cannot anticipate claims 1, 3, 4, 14 and 31.

In view of the above, applicants submit claims 1, 3, 4, 14 and 31 are in condition for allowance, notice of which is respectfully urged. Further, as claim 1 is generic, applicant requests rejoinder of the remaining claims that depend either directly or indirectly on claim 1.

Any questions regarding the filing of this amendment should be addressed to the undersigned attorney of record at 703-726-6020.

Respectfully submitted,

07/15/02
Date

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AMENDED CLAIM APPENDIX

1. (Amended) A lateral semiconductor device comprising:

a semiconductor chip;

two main electrodes on one major surface of the semiconductor chip; and

an alternating conductivity type layer between the main electrodes;

wherein the alternating conductivity type layer comprises first semiconductor regions of a firstconductivity type and second semiconductor regions of a second conductivity type;

wherein the first semiconductor regions and the second semiconductor regions are alternately arranged in a surface portion of the major surface; and

wherein the alternating conductivity type layer comprises a closed loop surrounding one of the main electrodes .

2 (Amended) [The lateral semiconductor device according to Claim 1,] A lateral semiconductor device comprising:

a semiconductor chip;

two main electrodes on one major surface of the semiconductor chip; and

an alternating conductivity type layer between the main electrodes;

wherein the alternating conductivity type layer comprises first semiconductor regions of a first conductivity type and second semiconductor regions of a second conductivity type;

wherein the first semiconductor regions and the second semiconductor regions are alternately arranged; and

wherein the alternating conductivity type layer comprises a closed loop surrounding one of the main electrodes;

wherein the alternating conductivity type layer comprises first sections, wherein the first semiconductor regions and the second semiconductor regions are arranged alternately at a first pitch, and second sections, wherein the first semiconductor regions and the second semiconductor regions are arranged alternately at a second pitch different from the first pitch.

6. (Amended) [The lateral semiconductor device according to Claim 3,] A lateral semiconductor device comprising:

a semiconductor chip;

two main electrodes on one major surface of the semiconductor chip; and

an alternating conductivity type layer between the main electrodes;

wherein the alternating conductivity type layer comprises first semiconductor regions of a first conductivity type and second semiconductor regions of a second conductivity type;

wherein the first semiconductor regions and the second semiconductor regions are alternately arranged;

wherein the alternating conductivity type layer comprises a closed loop surrounding one of the main electrodes;

wherein the alternating conductivity type layer comprises at least one straight section and at least one curved section; and

wherein the first semiconductor regions and the second semiconductor regions are arranged alternately at the first pitch in the straight sections, and the first semiconductor regions and the second semiconductor regions are arranged alternately at the second pitch in the curved sections.